

What is claimed is:

1. A method of processing uncalcined coke comprising:
  - 5 (a) introducing at least one stream comprising a refinery offgas into a combustion chamber;
  - (b) introducing at least one stream comprising uncalcined coke into the combustion chamber; and
  - 10 (c) combusting at least a portion of the stream comprising refinery offgas and at least a portion of the stream comprising uncalcined coke within the combustion chamber.
- 15 2. The method of claim 1 wherein the refinery offgas is a rotary kiln calciner offgas.
3. The method of claim 2 wherein the at least one rotary kiln calciner offgas and the at least one stream comprising uncalcined coke are simultaneously  
20 introduced into the combustion chamber.
4. The method of claim 3 wherein the rotary kiln offgas is mixed with oxygen to form a mixture of rotary kiln offgas and oxygen prior to introduction into the combustion chamber.
- 25 5. The method of claim 4 wherein the mixture of the rotary kiln offgas and oxygen is introduced into the combustion chamber simultaneously with the at least one stream comprising uncalcined coke and at least of a portion of each of the mixture and the at least one stream comprising uncalcined coke stream are  
30 simultaneously combusted.

6. The method of claim 5 wherein the at least one stream comprising uncalcined coke is introduced into the combustion chamber through at least one solid burner.
- 5 7. The method of claim 6 wherein the at least one stream comprising uncalcined coke is comprised of particles of coke having a particle size distribution in which at least 50% of the particles will pass through a 200 mesh screen.
- 10 8. The method of claim 7 wherein the at least one stream comprising uncalcined coke is comprised of a plurality of streams comprising uncalcined coke that are simultaneously introduced into the combustion chamber through a plurality of solid burners.
- 15 9. The method of claim 8 wherein at least one stream comprising oxygen is introduced into the combustion chamber.
10. The method of claim 8 wherein oxygen is introduced into the combustion chamber in amounts sufficient to produce combustion of the mixture and the plurality of streams comprising uncalcined coke and generate an incinerator outlet gas having a temperature from about 1090° C to about 1375° C and the incinerator outlet gas is used to produce electricity.
- 20 11. The method of claim 8 wherein oxygen is introduced into the combustion chamber in amounts sufficient to produce combustion of the mixture and the plurality of streams comprising uncalcined coke and generate an incinerator outlet gas having a temperature from about 1090° C to about 1375° C and the incinerator outlet gas is used to produce steam.
- 25 12. A system for processing coke comprising:
- 30 (a) means for combusting solids and gases;

- (b) means for introducing at least one steam comprising a refinery offgas into the means for combusting solids and gases;
  - (c) means for introducing at least one stream comprising uncalcined coke into the means for combusting solids and gases; and
  - (d) means for removing hot incinerator outlet gases from the means for combusting solids and gases.
- 10 13. The system of claim 12 wherein the system includes means for producing electricity using hot incinerator outlet gases from the means for combusting solids and gases.
14. A system for processing uncalcined coke comprising:
- (a) at least one combustion chamber for combusting solids and gases;
  - (b) a first inlet device connecting a source of refinery offgas and the combustion chamber;
  - (c) a second inlet device connecting a source of uncalcined coke and the combustion chamber.
15. The system of claim 14 wherein the refinery offgas source is an effluent gas stream from a coke calciner.
- 25 16. The system of claim 15 wherein the effluent gas stream from a coke calciner is an effluent gas stream from a rotary kiln calciner.
17. The system of claim 16 wherein the combustion chamber is positioned within a refractory walled incinerator and the combustion chamber has a longitudinal dimension, a transverse dimension, and a vertical dimension with a first end wall and a second end wall separated by the longitudinal dimension, a top

wall and a bottom wall separated by the vertical dimension, and a first side wall and a second side wall separated by the transverse dimension.

18. The system of claim 17 wherein the second inlet device comprises a plurality of solid burners positioned in the first end wall.

19. The system of claim 18 wherein the first inlet device comprises a connection to a source of oxygen.

20. The system of claim 19 wherein the first inlet device is connected to the combustion chamber along the longitudinal dimension of the combustion chamber between the first end wall and the second end wall at a location from 20 % to about 30 % of the longitudinal dimension of the combustion chamber from the first end wall.

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21. The system of claim 19 wherein the combustion chamber comprises a plurality of inlets connected to a source of oxygen.

22. A process for the production of electricity comprising the steps of:

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- (a) introducing at least one stream comprising a refinery offgas into a combustion chamber;
- (b) introducing at least one stream comprising uncalcined coke into the combustion chamber;
- (c) combusting at least a portion of the least one stream comprising a refinery offgas and at least a portion of the at least one stream comprising uncalcined coke in the combustion chamber to produce an incinerator outlet gas having a temperature of about 1090° C to about 1375° C; and
- (d) directing the incinerator outlet gas to electrical production equipment.

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23. The process of claim 22 wherein the refinery offgas is a rotary kiln calciner offgas.

24. The process of claim 23 wherein the rotary kiln offgas is mixed with  
5 oxygen to form a mixture of rotary kiln offgas and oxygen prior to introduction into the combustion chamber.

25. The process of claim 24 wherein the mixture of the rotary kiln offgas and oxygen is introduced into the combustion chamber simultaneously with the at  
10 least one stream comprising uncalcined coke and at least a portion of each of the mixture and the at least one stream comprising uncalcined coke stream are simultaneously combusted.

26. The process of claim 25 wherein the at least one stream comprising  
15 uncalcined coke is introduced into the combustion chamber through at least one solid burner.

27. The process of claim 26 wherein the at least one stream comprising uncalcined coke is comprised of particles of uncalcined coke having a particle size  
20 distribution in which at least 50% of the particles will pass through a 200 mesh screen.

28. The process of claim 27 wherein the at least one stream comprising uncalcined coke is comprised of a plurality of streams comprising uncalcined coke  
25 that are simultaneously introduced into the combustion chamber through a plurality of solid burners.

29. The process of claim 28 comprising the step of directing the incinerator outlet gas to heat transfer equipment to produce steam.

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30. A process according to claim 29, wherein steam and electricity are generated in a combined gas and steam turbine cycle.